

553 (CCPA 1966). Nonetheless, the examiner asserts it would be obvious to create such a vacuum. This assertion lacks foundation – the cited art does not teach or suggest this allegation. Leppard et al., relied upon by the examiner, fails to disclose a vacuum. Instead in Example 33 there is disclosed use of compression at 200 kp/cm². This is entirely the opposite of creating a vacuum over surface.

For this reason alone, the references do not render the pending claims obvious.

What is more, the use of a vacuum by applicants is to facilitate the final product to have sufficient strength and to reduce the amount of voids, regardless of oxygen inhibition. Leppard et al.'s compression step does not provide the same benefits in the resulting material.

The examiner, consequently, has not made out a prima facie case of obviousness. As such, the rejection is in error and should be withdrawn.

Applicant reiterates that Smith et al. vaguely states that the prepreg described therein can be used to repair “vehicles, installations, parts, and the like.” (Col. 2, lines 8-13.) “Installation” is defined as relating to “machinery, building structures, tanks, and the like which are metallic or plastic.” (Col. 1, lines 66-68.) The only specific items described are “tanks and similar containers which hold liquids and/or low pressure casts.” (Col. 2, lines 27-30.) Smith et al. is silent as to repair of airplanes. Nothing in Smith et al. leads a skilled artisan to repair an airplane. Smith et al. does not teach or suggest or motivate a skilled artisan to repair an airplane, as claimed. For this reason, the examiner has not made out a prima facie case of obviousness. Accordingly, the rejection is in error and should be withdrawn.

Moreover, applicant reiterates that Smith et al. teaches a “patch” that is used to repair vehicles, installations, and parts. In the case of a hole in such a vehicle, installation, or part, FIG. 3 shows a hole that is filled with material other than the patch, with the patch 19 then being applied over the hole. In this regard, see col. 4, lines 9-16. The examiner questions where in Smith et al. it is taught use of two different materials. Smith et al. expressly states that if a damaged area contains a hole, a different photocurable resin is first used to fill the whole, and then the patch is applied. (Col. 8, lines 41-46.) See also FIG. 3 in Smith et al. where it is clearly shown that the hole is filled with a molding 31 prior to application of the patch 19. The material in the hole in Smith et al. does not include a woven fiberglass prepreg. Smith et al. does

not teach or suggest use of the patch to fill a hole, as called for in claim 35. Consequently, the examiner has not made out a prima facie case of obviousness. Accordingly, the rejection is in error and should be withdrawn.

Turning to the dependent claims, claims 36-38 and 41 recite an acrylate oligomer. By contrast, Smith et al. discloses polyester resins (column 6, lines 51-59) and ethylenically unsaturated copolymerizable monomers (column 4, lines 22-23 and A resin is a high polymer, not an oligomer. (See Hawley's Condensed Chemical Dictionary.) Likewise, a monomer is not an oligomer. Smith et al. also discloses the use of novolacs having a functionality greater than 1.9. (Col. 7, line 11.) A novolac is neither an oligomer or made from an acrylate. Smith et al. does not teach or suggest use of acrylate oligomers. The examiner has indicated that burden has shifted to applicants to explain whether the material in Smith et al. is an oligomer. Plainly, however, in view of the previously submitted pages from Hawley's Condensed Chemical Dictionary, the diepoxide and triepoxides disclosed by Smith et al. are not oligomers. A diepoxide is difunctional, but is not a dimer. Thus, di- and triepoxides have only one repeating unit, and are not considered to be oligomers. With respect to the passages in applicant's specification, it should be appreciated that the epoxy acrylates et al. are in their oligomeric form, not monomers. For this additional reason, claims 36-38 and 41 are patentable over Smith et al. in view of Leppard et al.

With respect to the issue of combining an accelerator with Smith et al.'s acylphosphine oxides, it should be noted Smith et al. states that "Such UV sensitizers, especially the particularly preferred 2,4,6-trimethylbenzoyldiphenylphosphine oxide, surpass in their reactivity all conventional photoinitiators for unsaturated polyester resins. This high reactivity results in a high exothermicity on curing laminates." Not only does this passage not teach or suggest using the acylphosphine oxides with other accelerators, but leads a skilled artisan to avoid additional UV sensitizers because high exothermicity is already obtained. For this reason, the combination of Smith et al. with Leppard et al. is improper. The rejection based on this ground of rejection, particularly for dependent claims 36 and 41-43, should be withdrawn.

Claim 46 specifies that the amount of acrylic monomer in the curable formulation is at least about 30% and the amount of acrylic oligomer is at least about 20%. Claim 46 and its dependent claims further distinguish because Smith is limited to use of polyesters or novolacs as its major component. See col. 4 and col. 6.

In view of the foregoing, the rejection based on Smith et al. in view of Leppard et al. should be withdrawn.

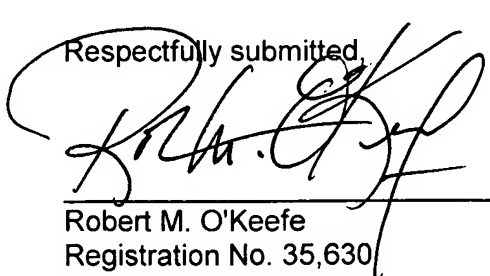
A three-months extension of time is submitted herewith. If the extension is missing, please consider this paper to be a request for such extension and deduct any required fee from deposit account 10-1205/TRIA:014.

CONCLUSION

In view of the foregoing, it is submitted that the claims are in condition for allowance. Accordingly, favorable reconsideration and Notice of Allowance are courteously solicited.

Should any fees under 37 CRF 1.16-1.21 be required for any reason relating to the enclosed materials, the Commissioner is authorized to deduct such fees from Deposit Account No. 10-1205/TRIA:014. The examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments, or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,



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